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California Energy Commission
1516 Ninth Street, MS-25
Sacramento, CA 95814-5512
Attn: Commissioners of the CEC

11/14/05

Ref: Petition to the Commission per Section 1221
Appliance Efficiency Regulations

Dear Commissioners,

I have read the Proposed Amendments to the Appliance Efficiency Regulations and I have a concern about the requirements for Walk-In refrigerators and freezers specified in section 1605.3(4) and Table A-6.

I have also read Fred Minelli's (Kysor Panel) letter. I agree with his comments, to which I have some additional comments.

ITEM NUMBER 1 (*DOOR HARDWARE*)

The typical access door size is three feet wide and six feet six inches in height. The automatic closer is designed to work with this size of door. For larger doors, automatic closers don't work as well. For these larger openings, the use of plastic curtains or other similar devices should be considered. We agree with Fred Minelli's recommendation that the maximum door size at which an automatic closer is required should be changed to dimensions less than four feet wide and less than seven feet tall.

ITEM NUMBER 2 (*ENVELOPE INSULATION*)

Doors:

If doors are included in the "envelope insulation", the new R-value requirements will require costly changes in the manufacturing process. This will result in very large costs for the manufacturers (and customers) to absorb and it will also take a significant amount of time to make the required design and manufacturing changes. From our viewpoint, the large amount of effort and additional costs are definitely not justified based on the relatively small amount of energy savings that might result.

Floors:

Freezers always have an installed prefabricated floor or have insulation under the concrete; which is also referred to as an insulated sub floor. However, as pointed out in some detail by Fred Minelli, the insulation rating for either type of floor should definitely not require the same R-value rating (R 36) as that of the walls and ceiling.

Walk-in refrigerators are typically installed on a concrete slab over grade without a prefabricated floor or insulated sub floor. If we are required to add a prefabricated floor to each refrigerator, the cost increase to the customers will be very significant. As pointed out by Fred Minelli, the additional effort and expense is probably not warranted in return for the very limited energy savings that might result.

As you can understand from the points discussed above, the term “envelope insulation” needs to be clearly defined, but this definition should not be developed without direct input from the manufacturers of walk-in refrigerators and freezers.

We agree that it is a good idea to establish minimum R-values for Refrigerators and Freezers, especially for walls and ceilings. However, there is also a very real need for the EPA to establish some specific industry guidelines on how to measure the R-values of insulated panels used in the walk-in refrigerator and freezer industry. It seems that every manufacturer has a different method of calculating the R-value of their products. This makes it very difficult to have a “level playing field” in the marketplace. According to manufacturer “X”, a 4 inch panel has an R-value of 32, but manufacturer “Y’s” panel only achieves an R-value of 28 even though both manufacturers are using the same polyurethane produced by the same chemical supplier. According to the manufacturers of the polyurethane chemicals, (see enclosed letters from Dow and BASF) it is not possible for a 4 inch foamed panel to achieve an R-value of 32, but this information seems to get “translated” somewhat differently by the individual manufacturers of the walk-in refrigerators and freezers.

Based on all of the issues discussed herein and also those pointed out by Fred Minelli, the new regulations are very difficult to interpret and even more difficult to fully adhere to. According to our brief survey of industry “experts”, it will be very difficult for the manufacturers of walk-in refrigerators and freezers to meet the necessary regulations by January 1, 2006. Based on this fact, we highly recommend that the effective date for Title 20 legislation be postponed for at least two years to allow manufacturers the time to make the appropriate changes. This extra time is also necessary so that the EPA can establish some industry guidelines on how to measure R-values in a consistent and well defined manner.

Energy conservation is a major concern for all of us and I would like to have the opportunity to discuss the specific issues and problems regarding the new legislation with you at your earliest convenience. We have discussed these issues with several of the walk-in refrigerator and freezer manufacturers and there is a general consensus that it is not possible to fully meet the new requirements in the timeframe that has been given.

We strongly recommend that the California Energy Commission delay the implementation of the new regulations until such time that the manufacturers of walk-ins have an opportunity to help review and develop a set of specifications that fully meet the objective of effective energy conservation. We look forward to hearing back from you in the very near future.

Sincerely

James W. Conner
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Refrigeration Department Manager